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1	WHC-SD-WM-DP-157	N/A	0	45-Day Safety Screening Results for Tank 241-BX-112, Auger Samples 95-AUG-047 and 95-AUG-048	Q	2	1	1

16. KEY

Approval Designator (F)	Reason for Transmittal (G)	Disposition (H) & (I)
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(G) Reason	(H) Disp.	(J) Name (K) Signature (L) Date (M) MSIN	(J) Name (K) Signature (L) Date (M) MSIN	(G) Reason	(H) Disp.
2	1	Cog.Eng. J.M. Conner	12-5-95		
2	1	Cog. Mgr. J.G. Kristofzski	12-7-95		
2	1	QA T.L. Tung	12/6/95		
		Safety			
		Env.			
2	1	Program Support A.D.Rice	12-6-95		

18.	19.	20.	21. DOE APPROVAL (if required) Ctrl. No.
A.E. Young 11-29-95 Signature of EDT Originator Date	N/A Authorized Representative for Receiving Organization Date	J.G. Kristofzski Cognizant Manager Date	[] Approved [] Approved w/comments [] Disapproved w/comments

BD-7400-172-2 (04/94) GEF097

45-Day Safety Screening Results for Tank 241-BX-112, Auger Samples 95-AUG-047 and 95-AUG-048

John M. Conner
Westinghouse Hanford Company, Richland, WA 99352
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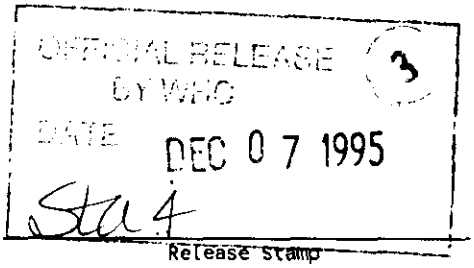
Abstract: N/A



Release Approval Date

Approved for Public Release

Westinghouse
Hanford Company

P.O. Box 1970 Richland, WA 99352

WHC-SD-WM-DP-157, REV. 0

ANALYTICAL SERVICES

45-DAY SAFETY SCREENING RESULTS FOR TANK 241-BX-112, AUGER SAMPLES 95-AUG-047 AND 95-AUG 048

DATE PRINTED: NOVEMBER 30, 1995

TABLE OF CONTENTS

This document consists of pages 1 through 35.

NARRATIVE

45-DAY SAFETY SCREENING REPORT FOR TANK 241-BX-112, AUGER SAMPLES 95-AUG-047 AND 95-AUG-048

ANALYTICAL SUMMARY

Two auger samples were taken from tank 241-BX-112 (BX-112). The samples were received at the 222-S Laboratories and underwent safety screening analyses, consisting of differential scanning calorimetry (DSC), thermogravimetric analysis (TGA), bulk density, and determination of total alpha activity. As appropriate, the results were compared to the safety screening limits at a confidence level of 95%. All analytical results were within the action limits stated in the SAP.

Based on the results of vapor monitoring prior to sampling, the BX-112 vapor space is far below the lower explosive limit (LEL). None of the data indicate that the tank is "unsafe" when compared to the criteria (energetics, criticality, and flammability) in the *Safety Screening Data Quality Objective* (Dukelow, et al., 1995). However, the tank cannot be declared "safe," as two full length profiles were not obtained by auger sampling. Core sampling will be necessary to fully satisfy the DQO.

Any additional analyses on the BX-112 auger samples will be included in a revision to this report.

SCOPE

This document serves as the 45-day report deliverable for the tank BX-112 auger samples collected on November 16 and 17, 1995 (samples 95-AUG-047 and 95-AUG-048). The 222-S Laboratories received, extruded, and analyzed each sample in accordance with the SAP [1]. Included in this report are the primary safety screening results obtained from the analyses, and copies of all DSC and TGA raw data scans as requested in the SAP. The results of tank dome space flammability screening are also included.

No additional testing to support safety screening analyses for these auger samples is required. Any additional analyses conducted by the 222-S Laboratories on these auger samples will be included in a revision to this report.

TANK DOME SPACE FLAMMABILITY SCREENING

Prior to auger sampling, the vapor space of tank BX-112 was screened for flammability issues. The results of combustible gas monitoring inside riser 3 of tank BX-112 are presented in Table 1. This measurement is conducted in the field and recorded in the work package (work package for BX-112 auger sampling is #ES-95-00217). The results indicated that the tank vapor space was at 0% of the LEL, far below the action limit of 10% stated in the DQO [2].

Table 1. Characteristics of BX-112 Vapor Space as Determined by Combustible Gas Monitoring.

Measurement	Result
Lower Explosive Limit (LEL)	0%
Oxygen (O_2)	20.9%
Total Organic Carbon (TOC)	11.3 ppm
Ammonia (NH_3)	125 ppm

SAMPLE RECEIPT, EXTRUSION, AND SUBSAMPLING

95-AUG-047

Auger sample 95-AUG-047 was collected from riser 3 of tank BX-112 on November 16, 1995. and extruded on November 21, 1995. This was a 50 cm (20 inch) auger sampler, with 39 flutes (this was the first time that this auger was used. It has twice as many flutes as the typical auger). The sample appeared fairly homogeneous. The waste was a very wet, light-brown sludge, which tended to drip from the auger onto the extrusion tray. Flutes 1-8 at the top of the auger were bare. The material on flutes 9-16 appeared slightly less wet than the lower portion of the sample. The material on flutes 9-16, totaling 45.8 grams, was segregated as the upper half-segment solids. Flutes 17-39 contained lumpy sludge (lumps disappeared upon subsampling). A total of 165.2 grams was subsampled as the lower half-segment solids. The half segment subsamples were homogenized and subsampled for further laboratory analyses, bulk density determination, and archiving.

95-AUG-048

Auger sample 95-AUG-048 was collected from riser 2 of Tank BX-112 on November 17, 1995, and extruded on November 21. This was a 50 cm (20 inch) auger sampler, with 19 flutes. The sample appeared to be a homogeneous, medium-brown, very wet sludge. Flutes 1-6 were bare. The sample was recovered on flutes 7-19, and mostly dripped off of the auger onto the extrusion tray. Due to the apparent length of the sample recovered [30 cm (12 inches)], the moderate-to-low recovery (81.3 g), and the apparent homogeneity, the sample was not subsampled into half segments, but homogenized and subsampled at the whole-segment level. Portions were then subsampled for bulk density determination and further laboratory analyses and archiving.

ANALYTICAL RESULTS

BULK DENSITY

Three subsamples were submitted for bulk density determination by centrifugation in a tared, graduated, vial per procedure LA-160-103, Rev. A-7. The results ranged from 1.31 to 1.35 g/cm^3. These results are presented in the summary tables. In order to conserve sample, duplicate analyses were not conducted.

THERMOGRAVIMETRIC ANALYSIS (TGA)

Three samples were submitted for moisture content determination by TGA per procedures LA-560-112, Rev. B-2, or LA-514-114, Rev. C-1 (a different procedure is used for each instrument). The samples were analyzed in duplicate. The results are presented in the summary tables, and the raw data scans are attached. All results were between 55.59 and 65.50 percent moisture. The relative percent difference (RPD) between sample and duplicate results for sample S95T003746 was 11.4%, which slightly exceeded the criterion of less than 10% given in the SAP. Inspection of the raw data (attached) indicates that the sample and duplicate scans are similar in shape, except that the weight loss for the sample result appears to begin at approximately 100 °C, instead of at ambient temperature. The chemist attributed this to static charge holding the sample tray to the side of the furnace [3]. Once the static charge was overcome, the weight loss scan appears very similar in shape to to the scan of the duplicate sample (although the endpoint differs by almost 7 weight percent). The sample was rerun in duplicate. The RPD for the rerun was 1.71%. Both the original results and the results of the rerun are included in the summary tables. The results of the rerun are noted by a "1" next to the sample number.

DIFFERENTIAL SCANNING CALORIMETRY (DSC)

Three samples were submitted for determination of energetics by DSC per procedure LA-514-113, Rev. C-1 or procedure LA-514-114, Rev. C-1. The samples were analyzed in duplicate. The results are presented in the summary tables, and the raw data scans are attached. None of the samples exhibited exotherms. Since none of the samples exhibited any exotherms, the statistical calculation of an upper 95% confidence level for each sample is unnecessary.

ALPHA TOTAL

Three solids samples were submitted for total alpha analysis per procedure LA-508-101, Rev. D-2. The samples were fused per procedure LA-549-141, Rev. D-0 prior to analysis. Two fusions were prepared per sample (for duplicate results). Each fused dilution was analyzed twice; the results were averaged and reported as one value. The highest result returned was 0.219 μCi/g, more than two orders of magnitude below the action limit of 41 μCi/g. The upper 95% confidence level for each sample has been calculated and is presented in Table 2. All of the adjusted results are far below the action limit of 41

μCi/g stated in the SAP. The RPD for sample S95T003751 was 22.3%. However, no rerun was deemed necessary, as the 95% confidence limit upper value for this sample was 0.336 μCi/g, far below the action limit of 41 μCi/g.

The alpha results reported by the lab are calculated assuming a density of 1.5 g/cm^3 for solid samples. As the bulk density results recorded for these samples are all below 1.5 g/cm^3, the alpha results reported remain conservative per the calculation described in the SAP [1].

One of the two standards run with these samples exhibited a recovery slightly outside the range specified in the SAP (110.2%). Since the result was so close to being within range, and the sample results were far below the limit, a rerun was deemed unnecessary. This result was well within the method control limits of 72.3-125.9%. All quality control results are presented in the summary tables.

Table 2. Comparison of Total Alpha Results at a Confidence Level of 95%.

Sample Description/ Sample Number	Sample Result	Duplicate Result	Mean	Var(Mean)	Upper 95% Confidence Limit
AUG-047 UH S95T003747	0.187	0.178	0.182	2.025E-05	0.211
AUG-047 LH S95T003751	0.175	0.219	0.197	4.84E-04	0.336
AUG-048 WS S95T003755	0.183	0.170	0.176	4.23E-05	0.218
AUG-047, AUG-048 combined	-	-	0.183 (weighted mean)	5.12E-05	0.228

Notes: var(mean) - variance of the mean; UH - upper half;
LH - lower half; WS - whole segment;
weighted mean - average for each auger given equal weight

REFERENCES

[1] J. M. Conner, *Tank 241-BX-112 Auger Sampling and Analysis Plan*, WHC-SD-WM-TSAP-051, Rev. 0A, Westinghouse Hanford Company, Richland, Washington, November 15, 1995.

[2] G. T. Dukelow, et al., *Tank Safety Screening Data Quality Objective*, WHC-SD-WM-SP-004, Rev. 2, Westinghouse Hanford Company, Richland, Washington, August 31, 1995.

[3] Personal Communication with B. D. Valenzuela, December 1, 1995.

SAMPLE DATA SUMMARY

INTERIM

45-Day Report for Auger Samples 95-AUG-047, 95-AUG-048
BX-112

CORE NUMBER: 95-AUG-047, 95-AUG-048
SEGMENT #: 95-AUG-047

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T003745			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.350	n/a	n/a	n/a	n/a	5.00e-01	n/a
S95T003746 1			% Water by TGA on Perkin Elmer	%	None	None	101.0	n/a	60.72	61.77	61.25	1.71	n/a	n/a	n/a
S95T003746			% Water by TGA on Perkin Elmer	%	None	None	100.5	n/a	55.59	62.30	58.95	11.4	n/a	n/a	n/a
S95T003746			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+01	480.0	99.97	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T003746			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+01	480.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T003747		F	Alpha of Digested Solid	uCi/g	-1.0e+01	41.01	92.97	<4.33e-03	1.87e-01	1.78e-01	1.82e-01	4.93	n/a	5.47e-03	8.30E+00

L Lower Half of Segment: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T003749			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.310	n/a	n/a	n/a	n/a	5.00e-01	n/a
S95T003750			% Water by TGA on Perkin Elmer	%	None	None	100.5	n/a	63.37	63.52	63.45	0.24	n/a	n/a	n/a
S95T003750			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+01	480.0	99.97	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T003750			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+01	480.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T003751		F	Alpha of Digested Solid	uCi/g	-1.0e+01	41.01	110.2	<3.12e-03	1.75e-01	2.19e-01	1.97e-01	22.3	98.47	3.80e-03	8.51E+00

=> Limit violated
=> Selected Limit

INTERIM

45-Day Report for Auger Samples 95-AUG-047, 95-AUG-048
BX-112

CORE NUMBER: 95-AUG-047, 95-AUG-048
SEGMENT #: 95-AUG-048

SEGMENT PORTION: W Whole Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T003753			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.310	n/a	n/a	n/a	n/a	5.00e-01	n/a
S95T003754			% Water by TGA using Mettler	%	None	None	100.5	n/a	65.42	65.50	65.46	0.12	n/a	n/a	n/a
S95T003754			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+01	480.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T003754			DSC Exotherm using Mettler	Joules/g	-1.0e+01	480.0	92.44	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T003755		F	Alpha of Digested Solid	uCi/g	-1.0e+01	41.01	92.97	<4.24e-03	1.83e-01	1.70e-01	1.76e-01	7.37	n/a	4.98e-03	7.73E+00

=> Limit violated
=> Selected Limit

α

INORGANIC ANALYSES

LABCORE Data Entry Template for Worklist# 3729

Analyst: SMF **Instrument:** DSC01 DSC01 **Book #** 12N149

Method: LA-514-113 Rev/Mod C-1

Worklist Comment: BX-112 DSC PLease run under N2. PRIORITY.

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	SOLID	28.45	26.3	N/A	Joules/g
95000202	BX-112	2	SAMPLE	S95T003754	0		DSC-01	SOLID	N/A	0		Joules/g
95000202	BX-112	3	DUP	S95T003754	0		DSC-01	SOLID	0	0	N/A	Joules/g

Final page for worklist # 3729

Suzie Fulton for Suzie Fulton 11/27/95
Analyst Signature **Date**

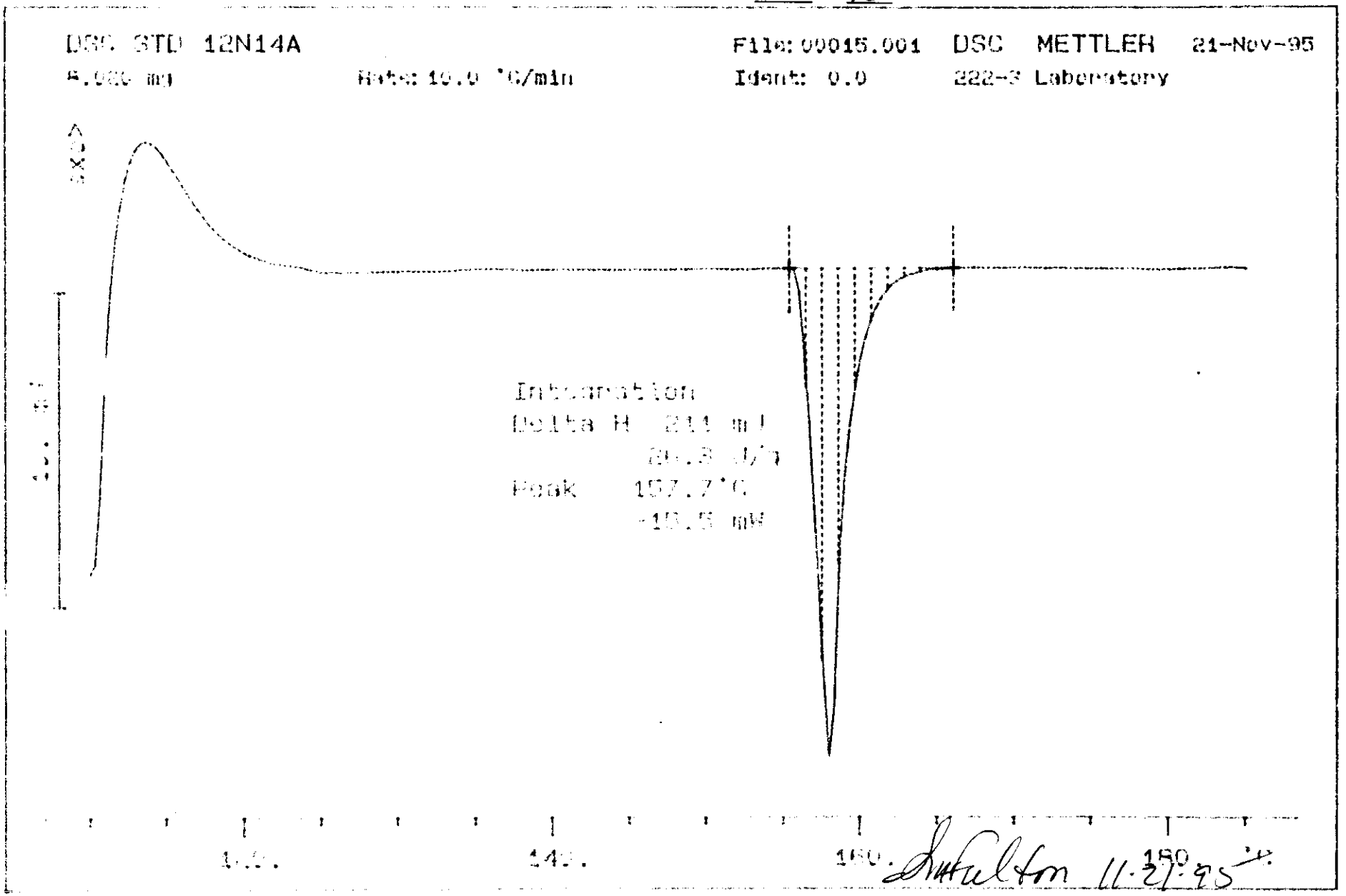
Verified by Blandina Valenzuela 11/27/95

RLH 11/22/95
Analyst Signature **Date**

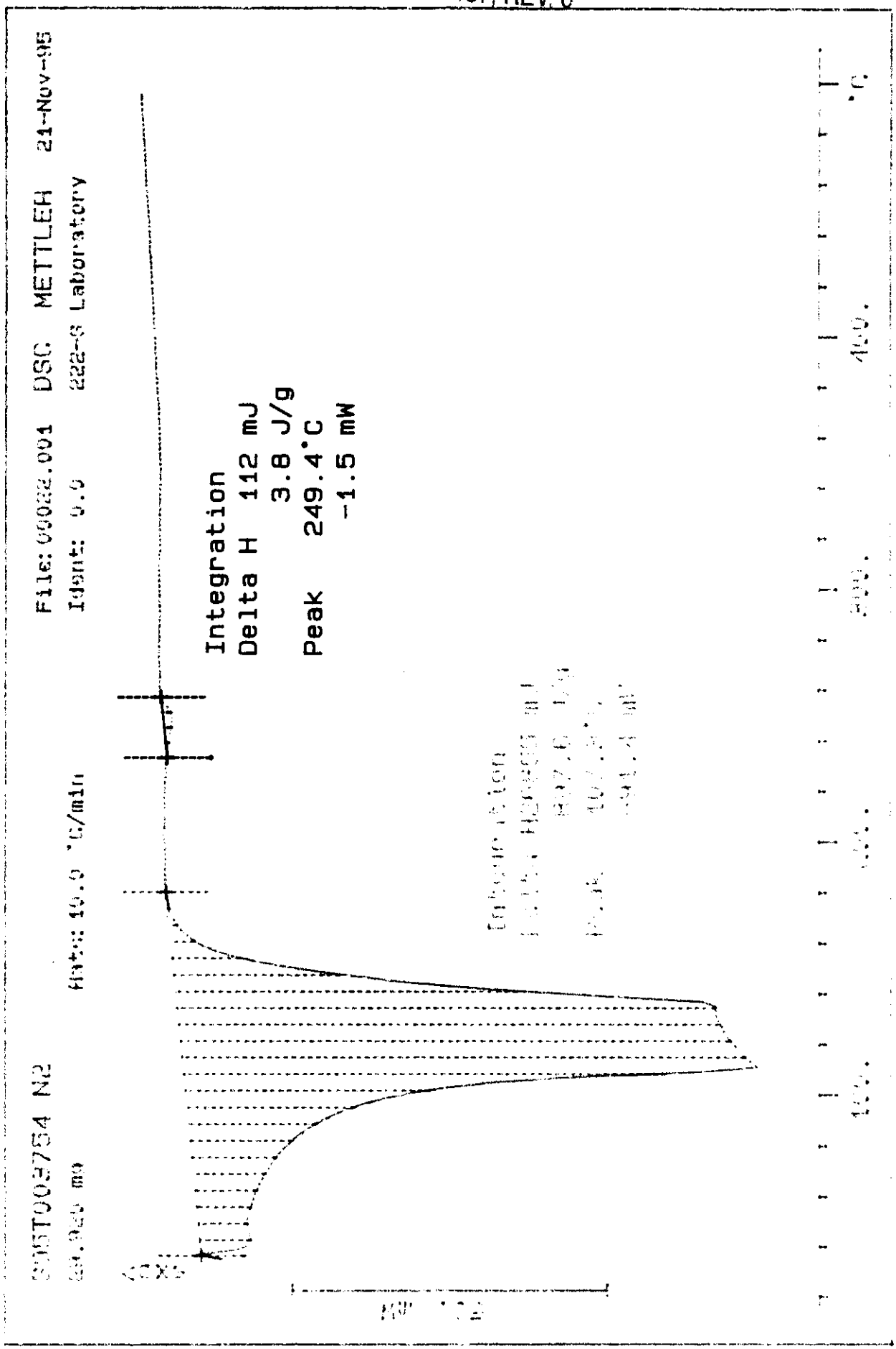
Data Entry Comments:
Sample has an [illegible] before water evolvement at [illegible]
value of 30 J/g in Sample dup. SMF

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 11 TO 13.



L. Sutfulton 11-27-95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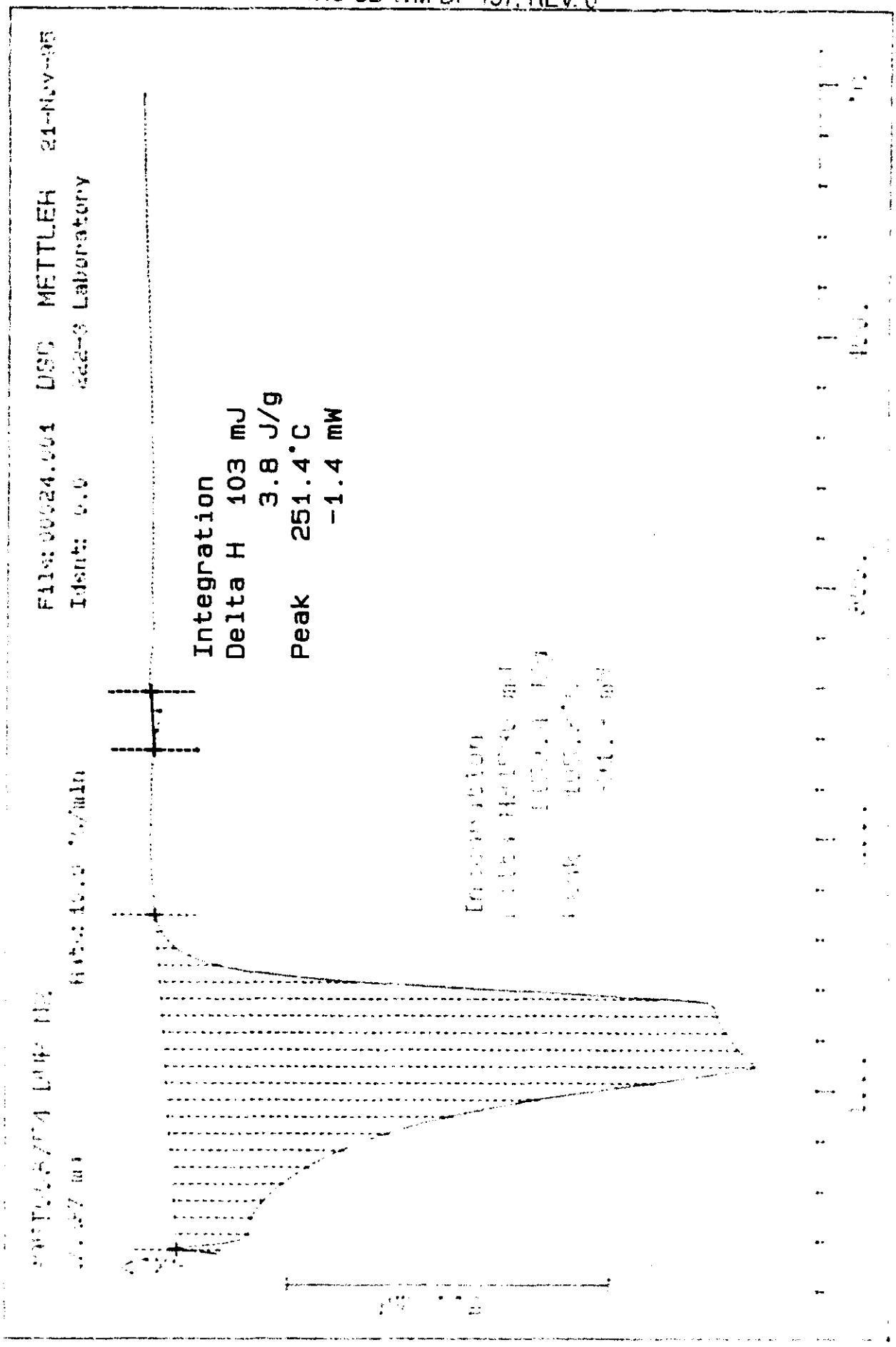
Ident: 0.0 222-S Laboratory
Integration
Delta H 112 mJ
3.8 J/g
Peak 249.4°C
-1.5 mW
°C


Integration
Delta H 103 mJ
3.8 J/g
Peak 251.4°C
-1.4 mW

LABCORE Data Entry Template for Worklist# 3735

Analyst: SMF **Instrument:** DSC01 DSC03 **Book #** 12414

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: PE BX112 DSC

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				DSC-03	SOLID	2845	2844	N/A	Joules/g
95000202	BX-112	2 SAMPLE	S95T003746	0		DSC-03	SOLID	N/A	0		Joules/g
95000202	BX-112	3 DUP	S95T003746	0		DSC-03	SOLID	0	0	N/A	Joules/g
95000202	BX-112	4 SAMPLE	S95T003750	0		DSC-03	SOLID	N/A	0		Joules/g
95000202	BX-112	5 DUP	S95T003750	0		DSC-03	SOLID	0	0	N/A	Joules/g

Final page for worklist # 3735

Analyst Signature / Date 11/27/95

Verified by Blandina Valenzuela 11/27/95

Analyst Signature / Date

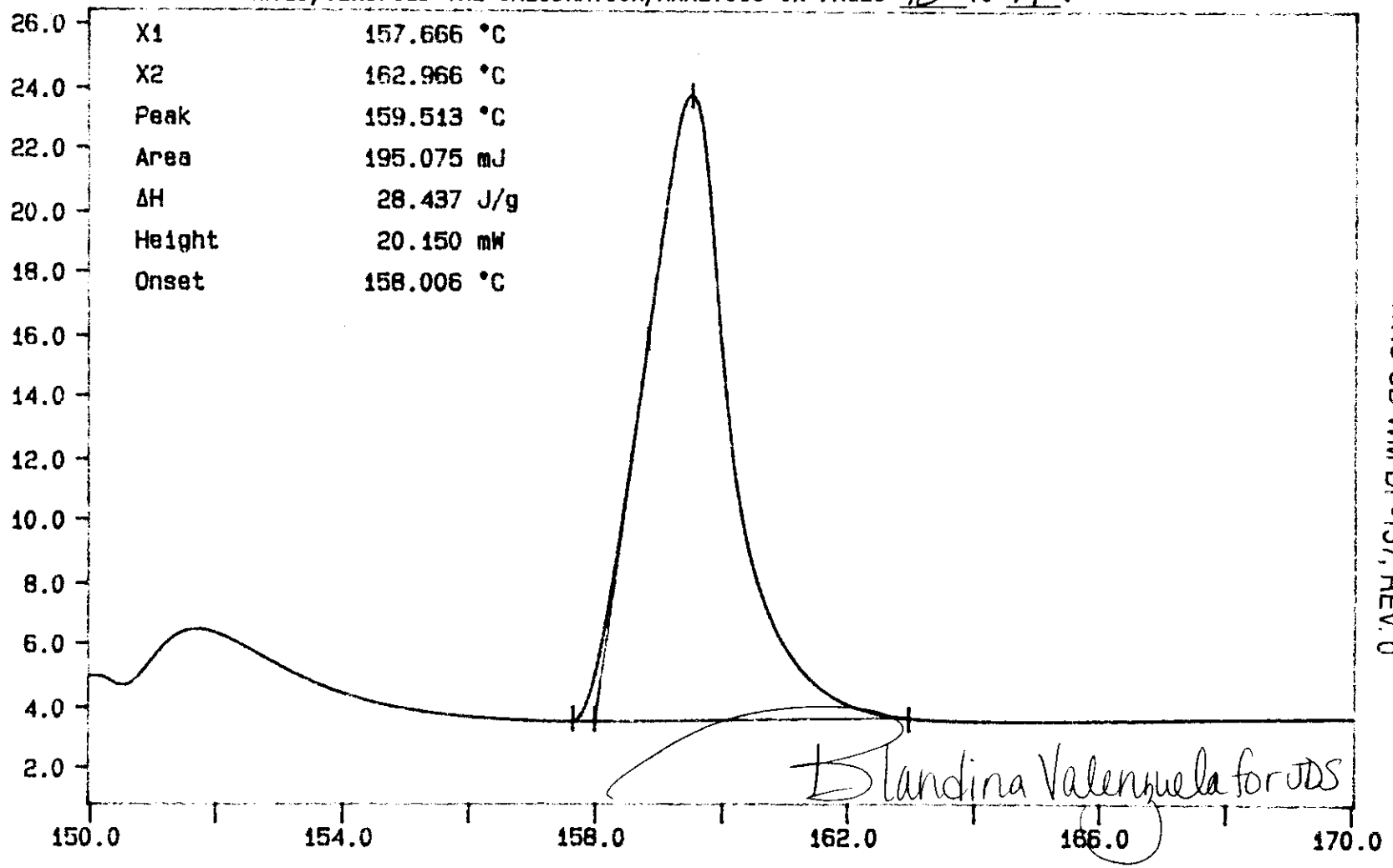
S95T003746 produced an endotherm at 119.6°C with a delta H of 1464.2 J/g

Data Entry Comments: S95T003750 produced an endotherm at ~~118.9~~ 113.8°C (11/27/95) with a delta H of 1333.3 J/g

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: DSC
File info: IND112101 Tue Nov 21 07:55:04 1995
Sample Weight: 6.860 mg
12N14A Indium at 10C/min

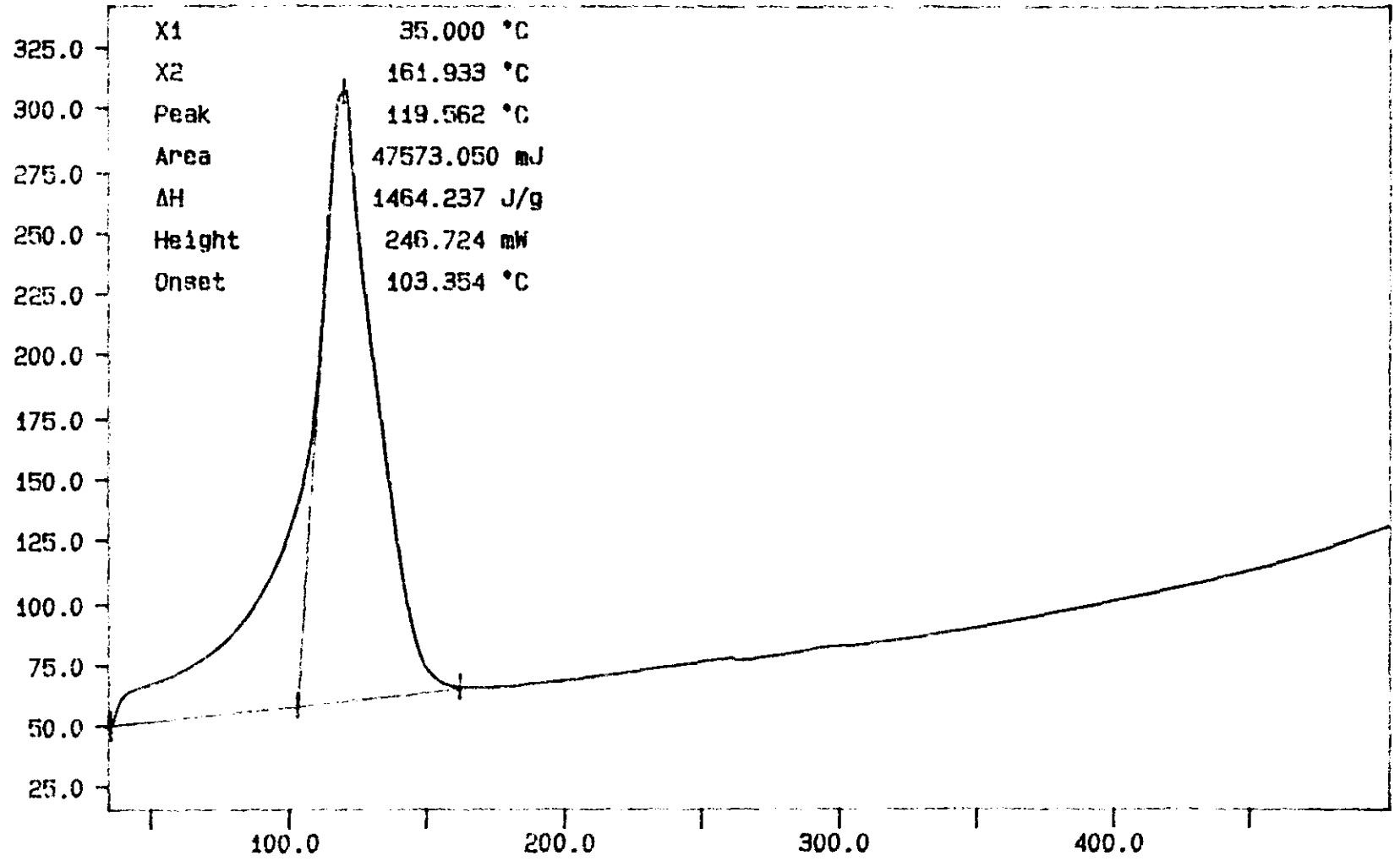
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 15 TO 19.



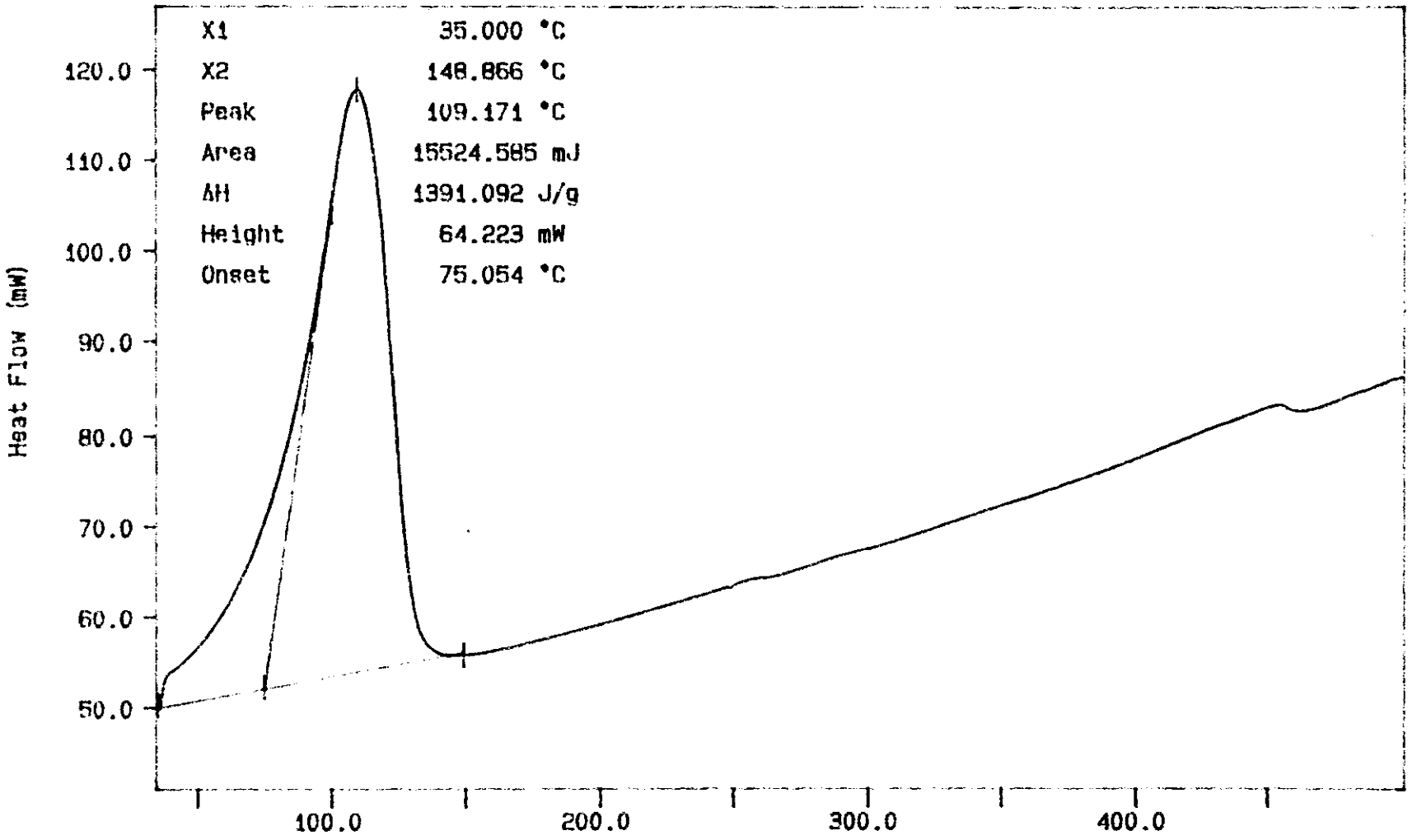
N2, EXOTHERM DOWN
Temperature (°C)
TEMP1: 150.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 170.0 C

JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Nov 21 17:32:38 1995

Curve 1: DSC
File info: SAM112103 Tue Nov 21 18:26:33 1995
Sample Weight: 32.490 mg
S95T003746



Curve 1: DSC
File info: SAM112104 Tue Nov 21 21:05:32 1995
Sample Weight: 11.160 mg
S95T003746 DUP

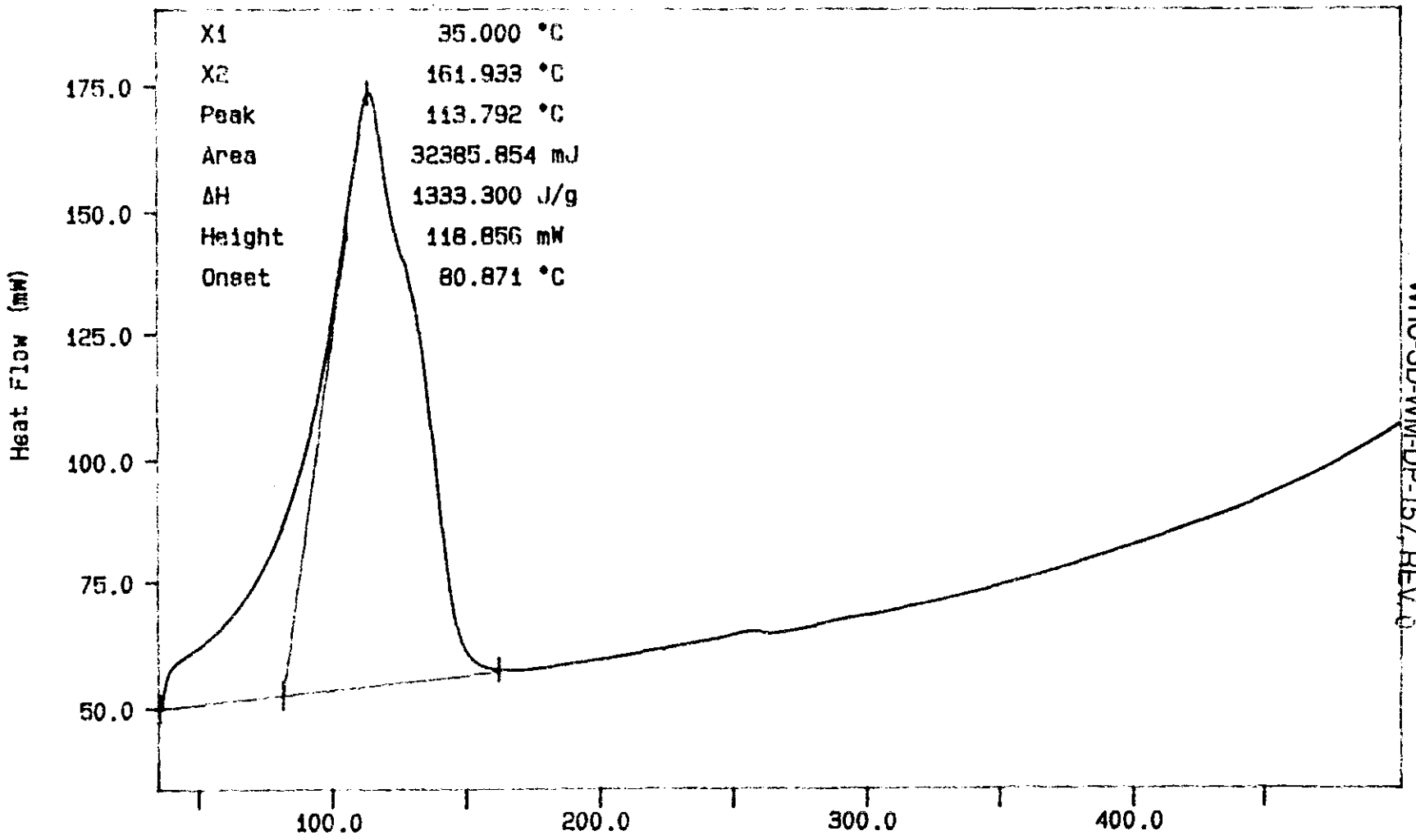


exotherm down, N2 purge gas

TEMP1: 25.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 400.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Nov 21 21:09:18 1995

Curve 1: DSC
File info: SAM112105 Tue Nov 21 22:19:21 1995
Sample Weight: 24.290 mg
S95T003750

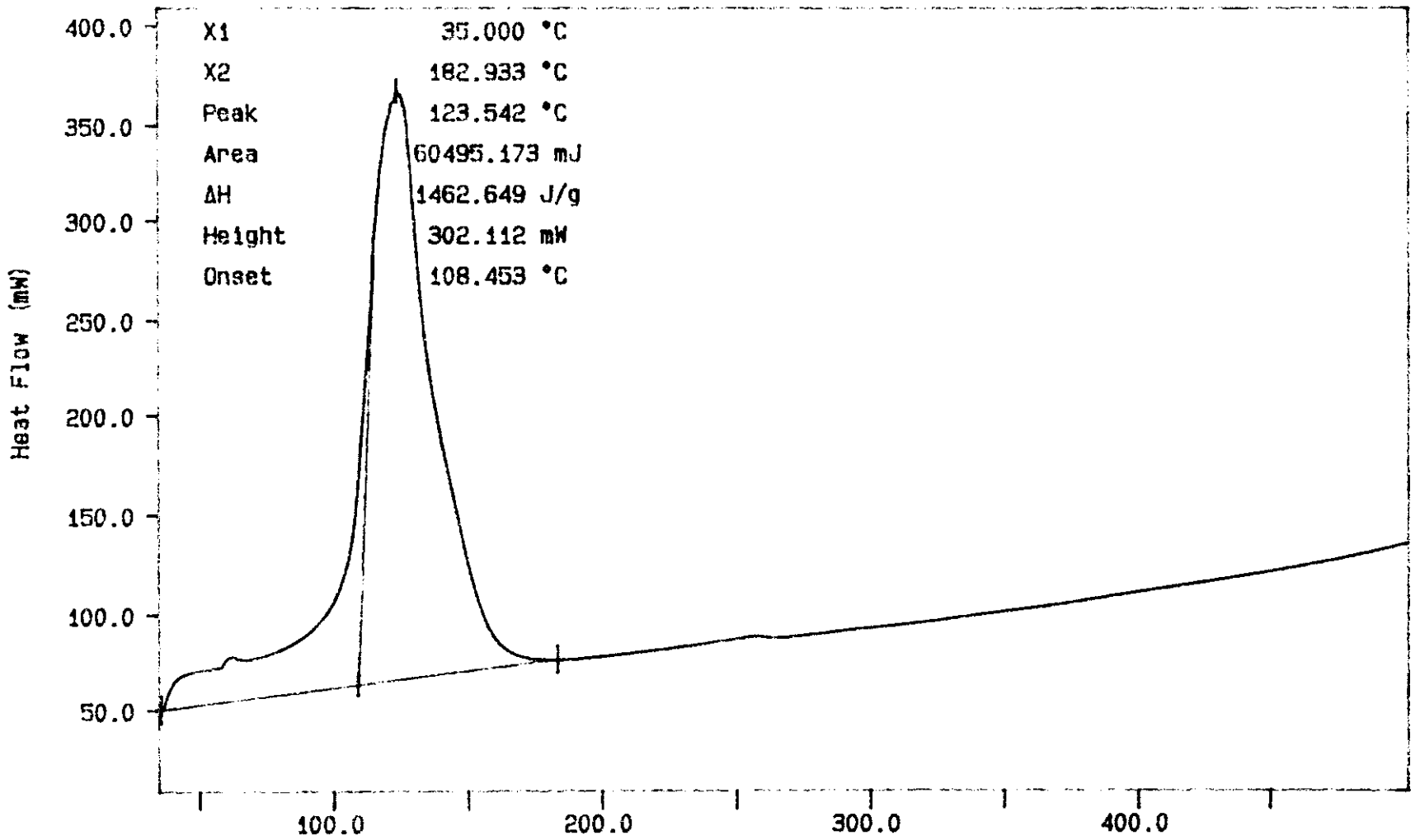


exotherm down, N2 purge gas

TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Nov 21 22:24:53 1995

Curve 1: DSC
File info: SAM112106 Tue Nov 21 23:21:17 1995
Sample Weight: 41.360 mg
S95T003750 DUP



exotherm down, N2 purge gas

TEMP1: 25.0 °C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 °C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Nov 22 00:25:42 1995

worklistrpt Version 2.1 05/15/95
12/01/95 13:28

LABCORE Data Entry Template for Worklist# 4000

Analyst: BDV **Instrument:** DSC01 **Book #** ———

Method: LA-514-113 Rev/Mod ———

Worklist Comment: Dry DSCs for BX-112. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
95000202	BX-112	1	SAMPLE	S95T003746	0		DSC-02	SOLID	N/A	Ø		Joules/g Dry
95000202	BX-112	2	DUP	S95T003746	0		DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
95000202	BX-112	3	SAMPLE	S95T003750	0		DSC-02	SOLID	N/A	Ø		Joules/g Dry
95000202	BX-112	4	DUP	S95T003750	0		DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
95000202	BX-112	5	SAMPLE	S95T003754	0		DSC-02	SOLID	N/A	Ø		Joules/g Dry
95000202	BX-112	6	DUP	S95T003754	0		DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry

Final page for worklist # 4000

Data entered + verified by Blandina Valenzuela 12/1/95

Analyst Signature **Date**

Analyst Signature **Date**

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 3730

Analyst: SME **Instrument:** TGA01 TGA01 **Book #** 65N8A

Method: LA-560-112 Rev/Mod B-1

Worklist Comment: BX-112 TGA. Please run under N2. PRIORITY.

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	59.74	60.05	N/A	%
95000202	BX-112	2 SAMPLE	S95T003754	0	TGA-01	SOLID	N/A	65.42		%
95000202	BX-112	3 DUP	S95T003754	0	TGA-01	SOLID	65.42	65.50	N/A	%

Final page for worklist # 3730

[signature] for [signature] 11/22/95
Analyst Signature / Date

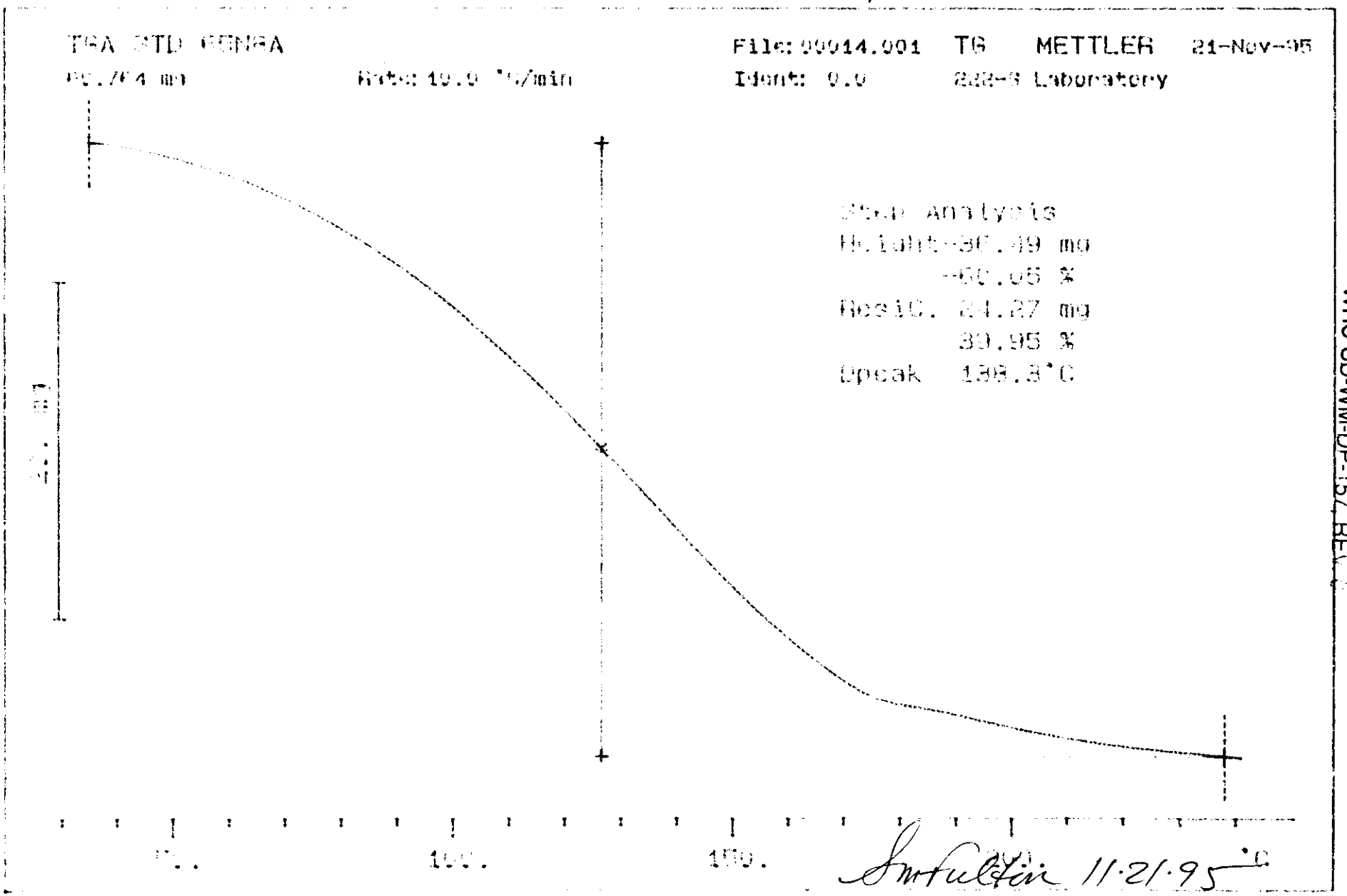
[signature] 11/22/95
Analyst Signature / Date

Verified by Blandina Valenzuela
11/27/95

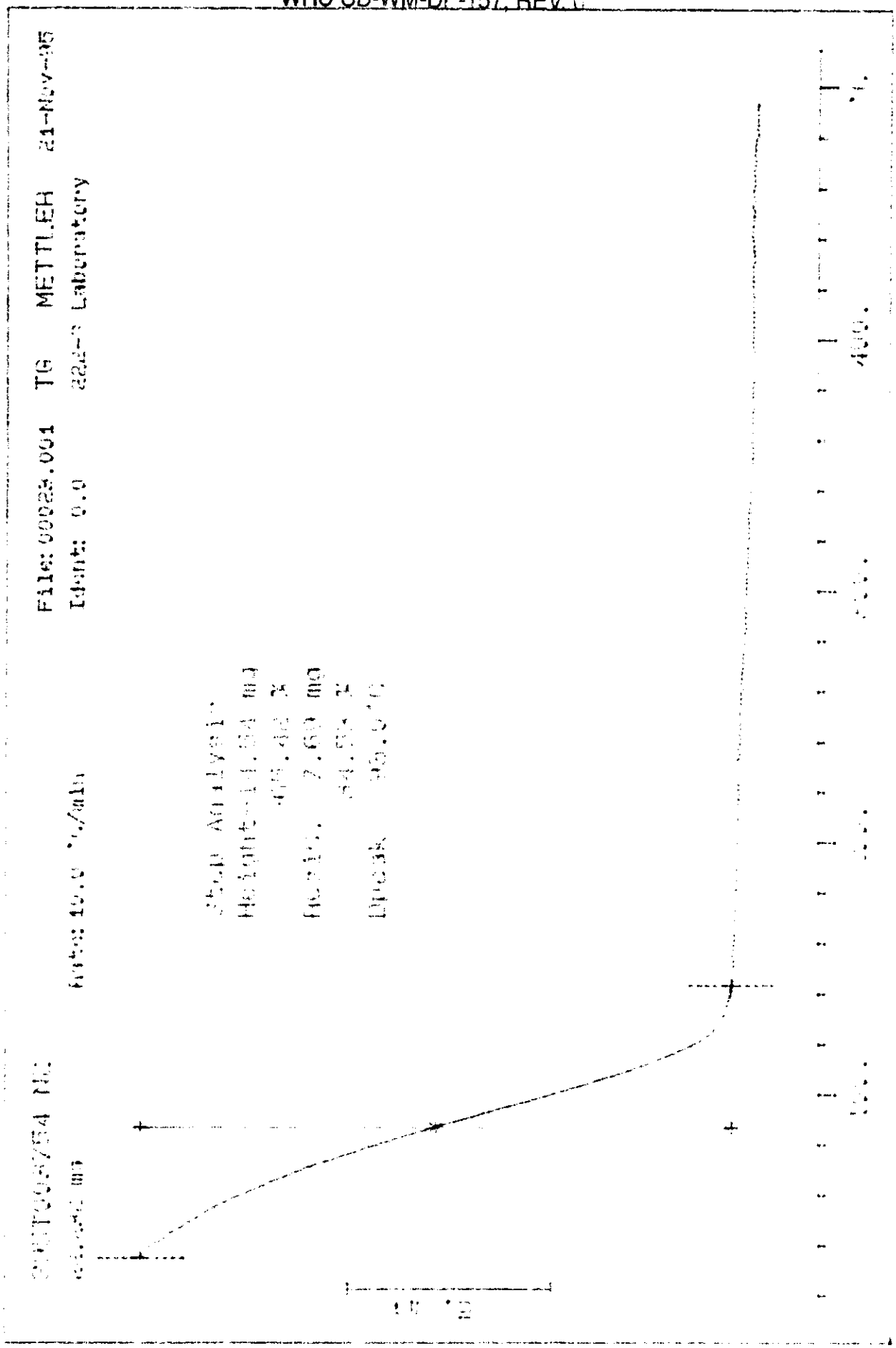
Data Entry Comments:

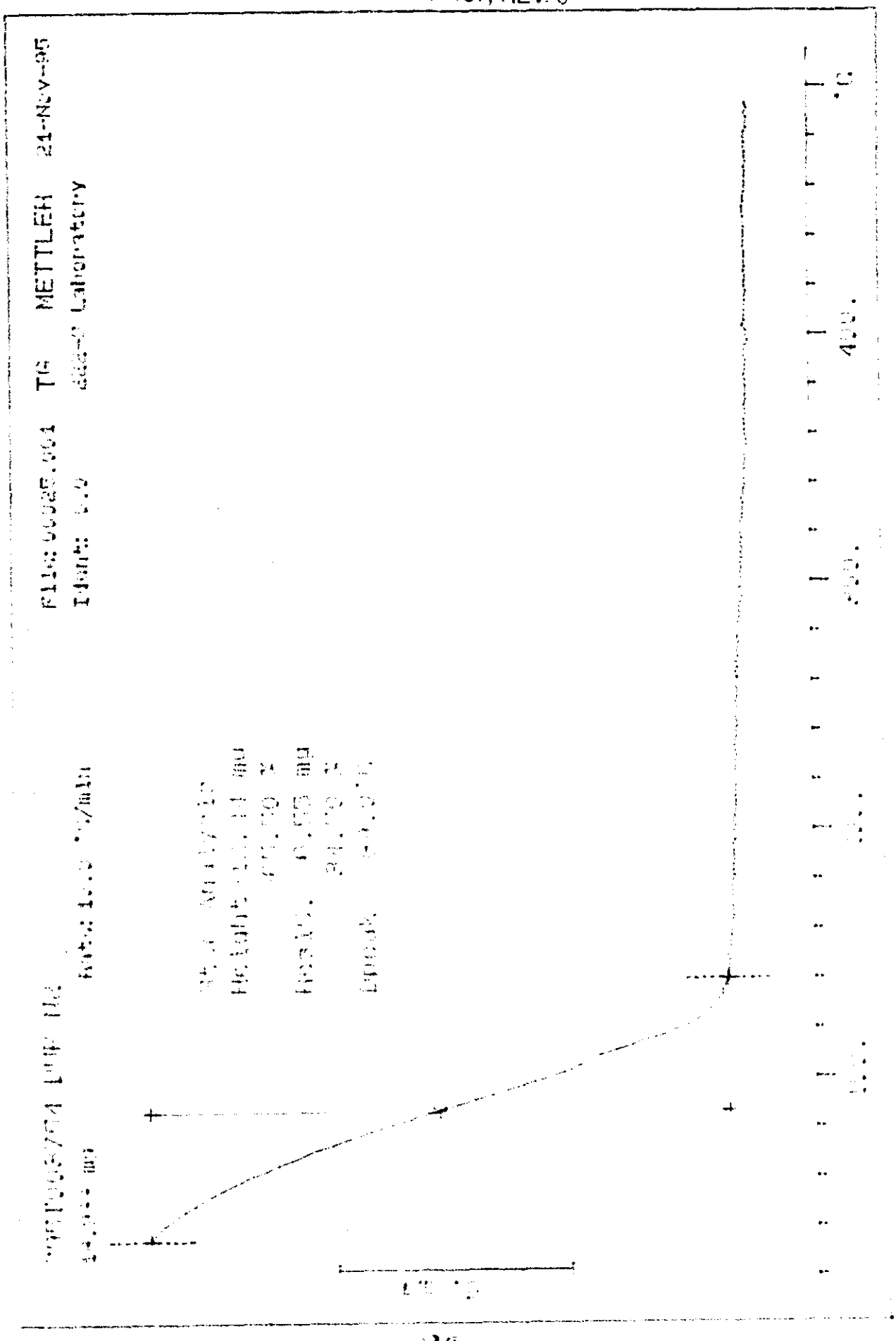
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 22 TO 24 .



11·21·95


File: 00023.001 TG METTLER 21-Nov-95
Lab: 222-S Laboratory


TG METTLER 24-Nov-95

LABCORE Data Entry Template for Worklist# 3734

Analyst: SmE **Instrument:** TGA01 TGA03 **Book #** 65NSA

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: PE BX-112 tga

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-03	SOLID	59.74	60.04	N/A	%
95000202	BX-112	2	SAMPLE	S95T003746	0		TGA-03	SOLID	N/A	55.59		%
95000202	BX-112	3	DUP	S95T003746	0		TGA-03	SOLID	55.59	63.30	N/A	%
95000202	BX-112	4	SAMPLE	S95T003750	0		TGA-03	SOLID	N/A	63.37		%
95000202	BX-112	5	DUP	S95T003750	0		TGA-03	SOLID	63.37	63.52	N/A	%

Final page for worklist # 3734

Analyst Signature Date 11/21/95

Verified by Blandina Valenzuela 11/27/95

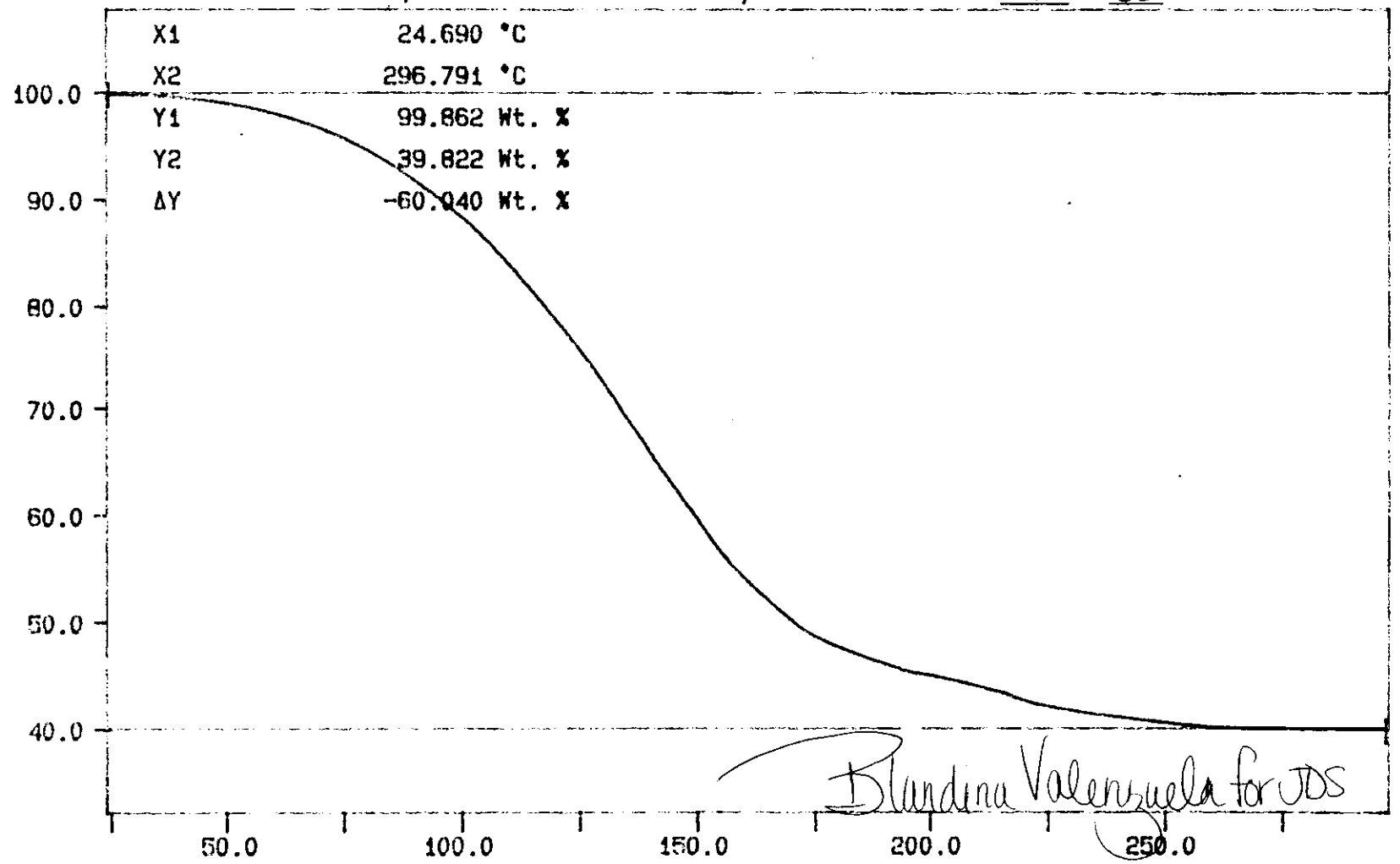
Analyst Signature Date 11/27/95

Data Entry Comments: S95T003746 the flat portion of the thermogram is due to static electricity between the sample pan and the furnace. the sample will be run again

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: TGA
File info: TER112101 Tue Nov 21 07:47:10 1995
Sample Weight: 24.173 mg
65N8-A Terliq

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 26 TO 30.

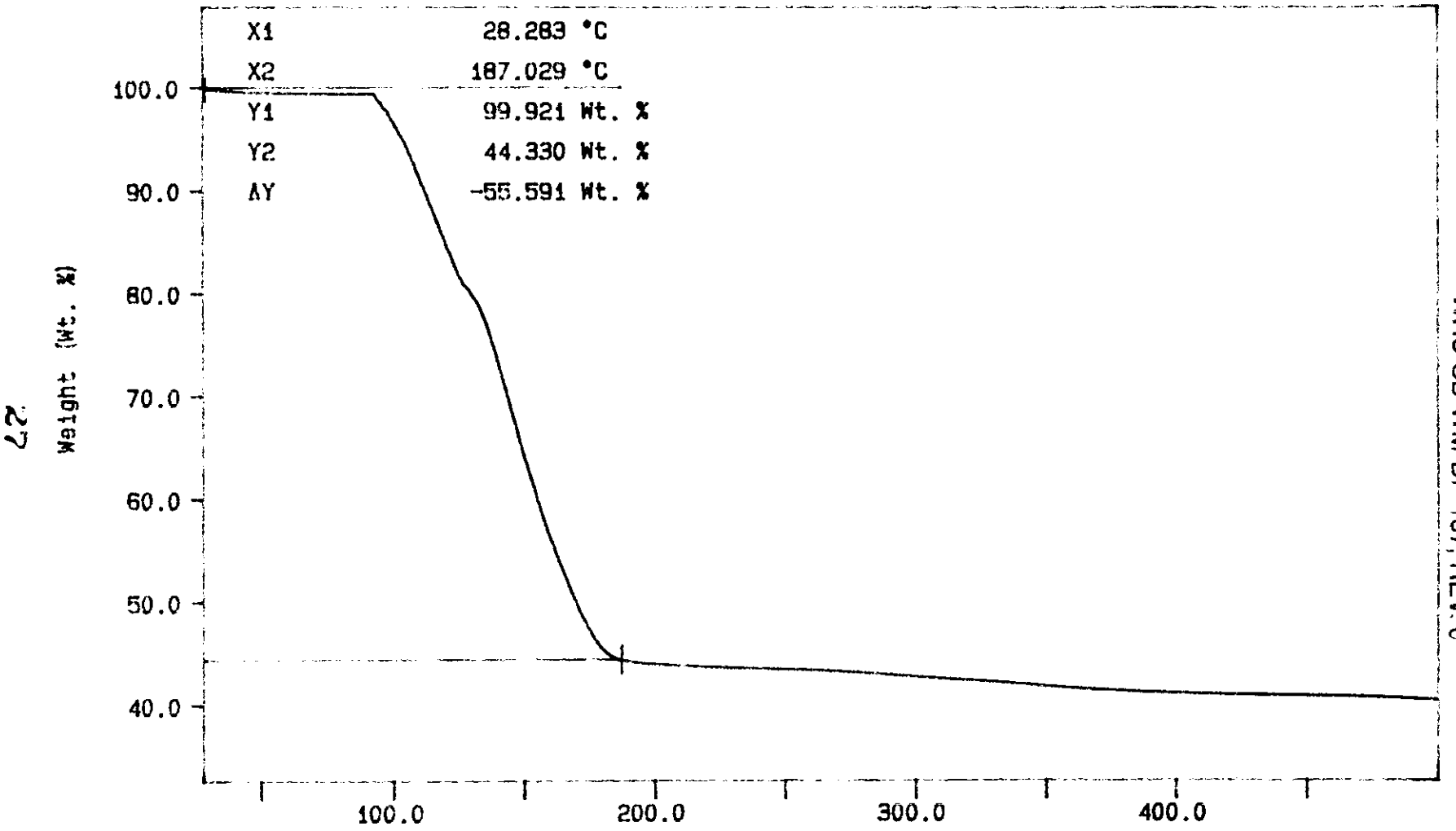


Blandina Valenzuela for JDS

N2 10C/MIN
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 300.0 C

JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Nov 21 17:39:44 1995

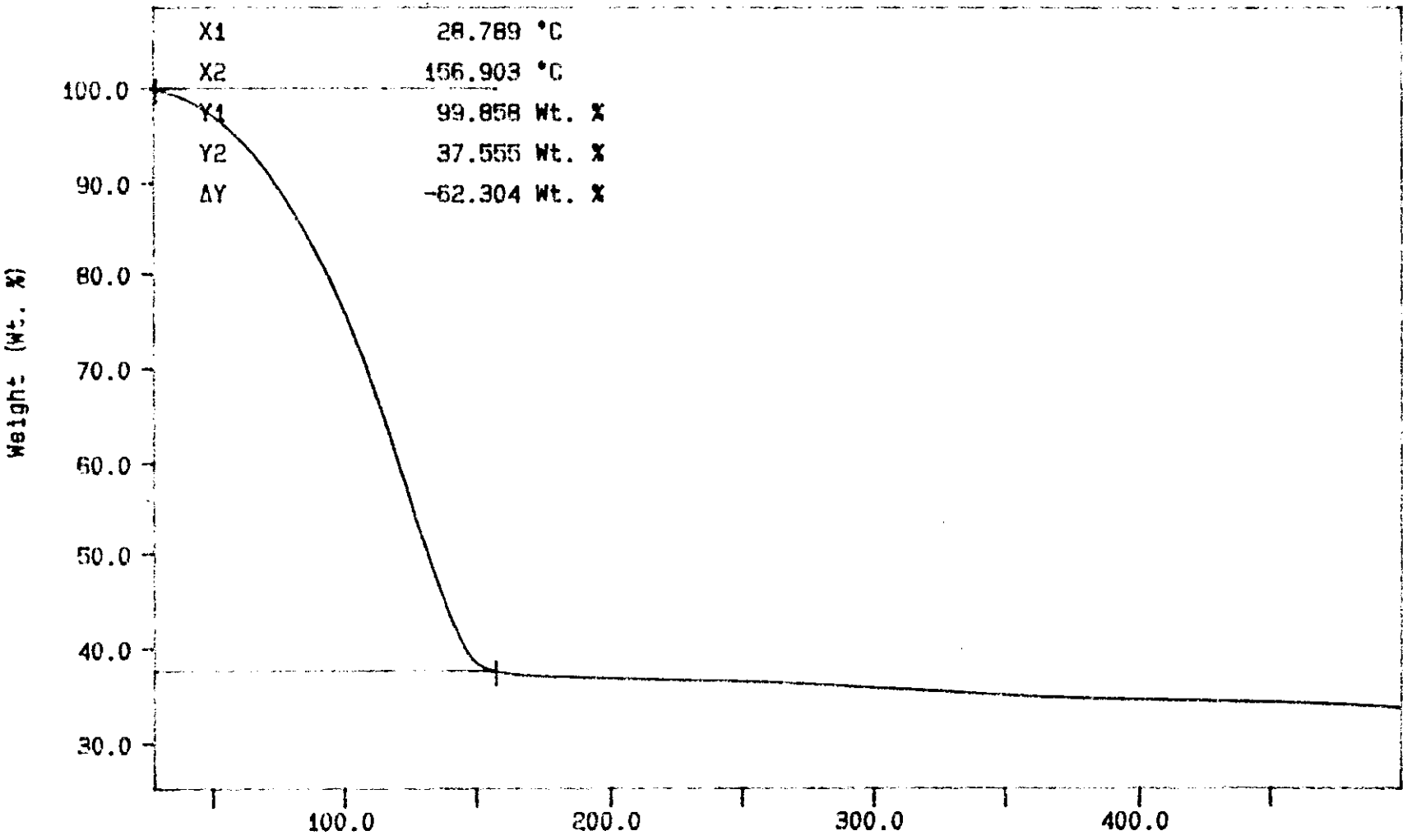
Curve 1: TGA
File info: SAM112103 Tue Nov 21 18:30:51 1995
Sample Weight: 32.917 mg
S95T003746



10C/MIN N2
TEMP1: 30.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Nov 21 19:04:17 1995

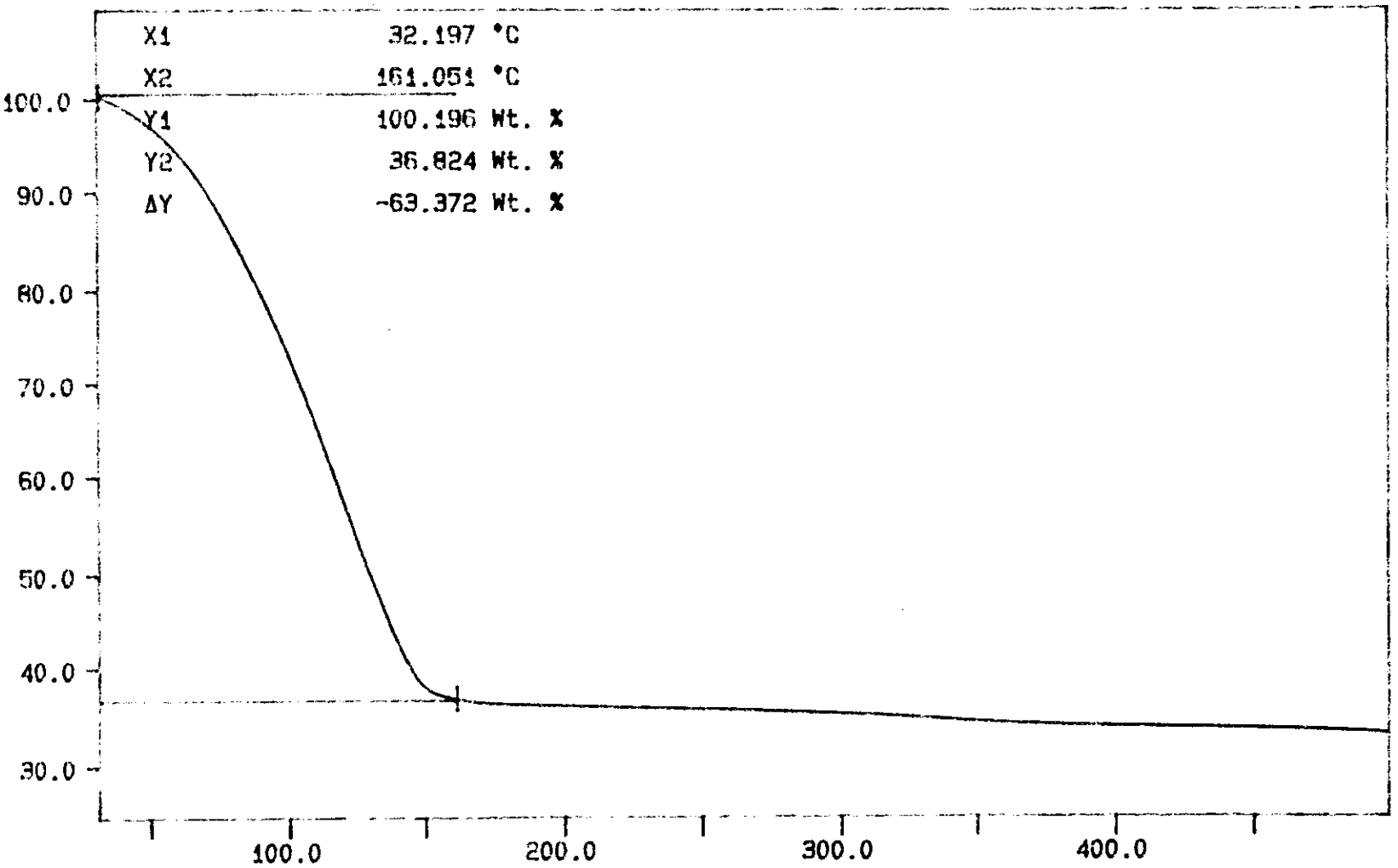
Curve 1: TGA
File info: SAM112104 Tue Nov 21 21:08:37 1995
Sample Weight: 17.745 mg
S95T003746 DUP



10C/MIN N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Nov 21 21:14:57 1995

Curve 1: TGA
File info: SAM112105 Tue Nov 21 22:15:25 1995
Sample Weight: 16.036 mg
S95T003750

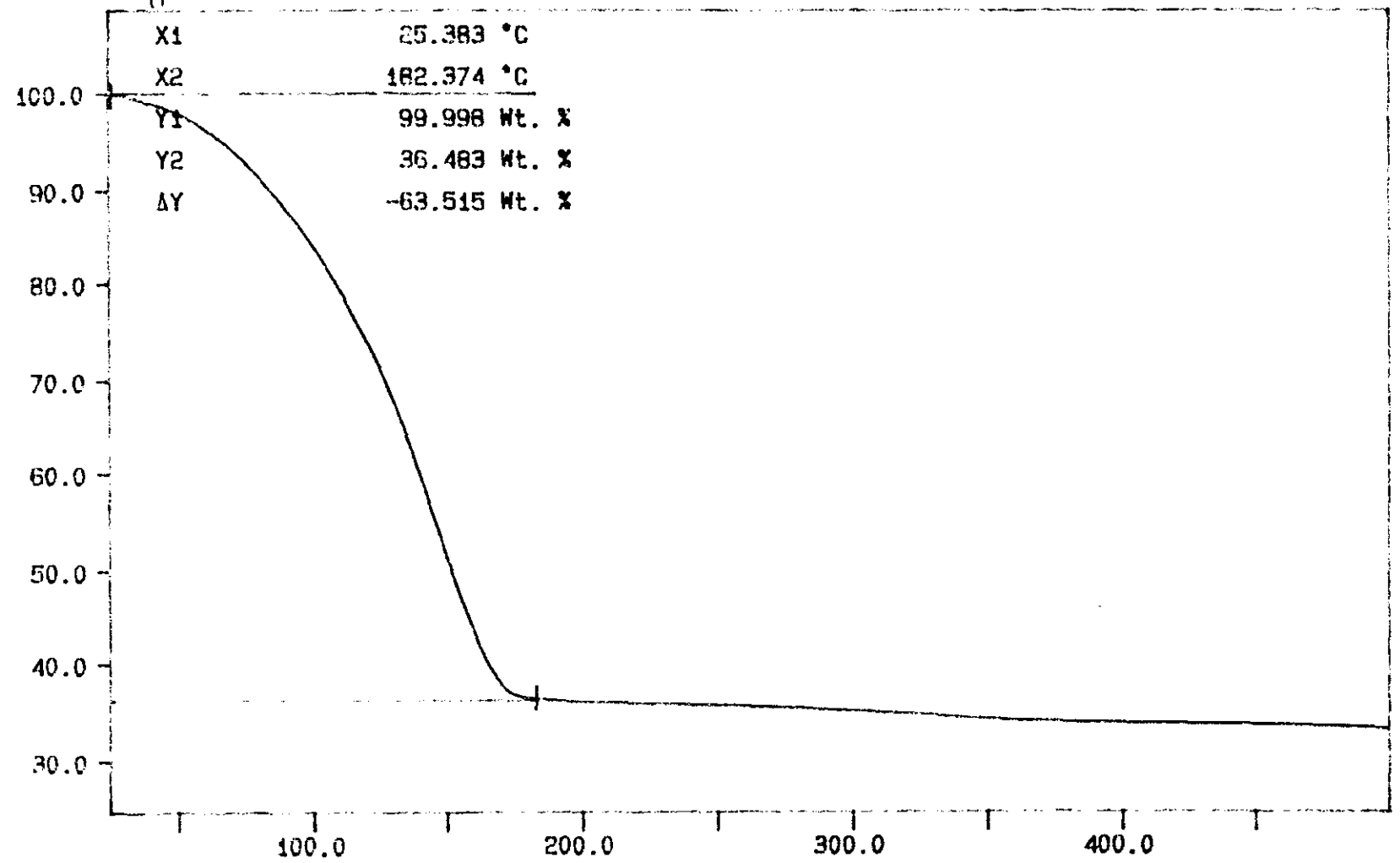


10C/MIN N2
TEMP1: 25.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Nov 21 22:31:24 1995

WHC-SD-WM-DP-157, REV. 0

Curve 1: TGA
File info: SAM112106 Tue Nov 21 23:26:24 1995
Sample Weight: 28.341 mg
S95T003750 DuP
SMF 11.21.95



10C/MIN N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Nov 22 00:32:42 1995

WHC-SD-WM-DP-157, REV. 0

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LABCORE Data Entry Template for Worklist# 4003

Analyst: JDS **Instrument:** TGA0 3 **Book #** 65N8-A

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: Please run BX-112 TGAs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-03	SOLID	59.74	60.32	N/A	%
95000202	BX-112	2	SAMPLE	S95T003746	1		TGA-03	SOLID	N/A	60.72		%
95000202	BX-112	3	DUP	S95T003746	1		TGA-03	SOLID	60.72	61.77	N/A	%

Final page for worklist # 4003

See attached for signatures
Analyst Signature **Date** 12/5/95

Verified by Blandina Valenzuela 12/6/95

[signature] 12-6-95
Analyst Signature **Date**

Data Entry Comments: Sample produced a second weight loss step of 3.976%

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 4003

Analyst: Jds **Instrument:** TGA0 ✓ 12/5/95 BdV **Book #** 65N8-A

Method: LA-560-112 Rev/Mod _____

Worklist Comment: Please run BX-112 TGAs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID			N/A	%
95000202	BX-112	2	SAMPLE	S95T003746	0		TGA-01	SOLID	N/A			%
95000202	BX-112	3	DUP	S95T003746	0		TGA-01	SOLID			N/A	%

Final page for worklist # 4003

JAh Sph 12-5-95
Analyst Signature **Date**

Analyst Signature **Date**

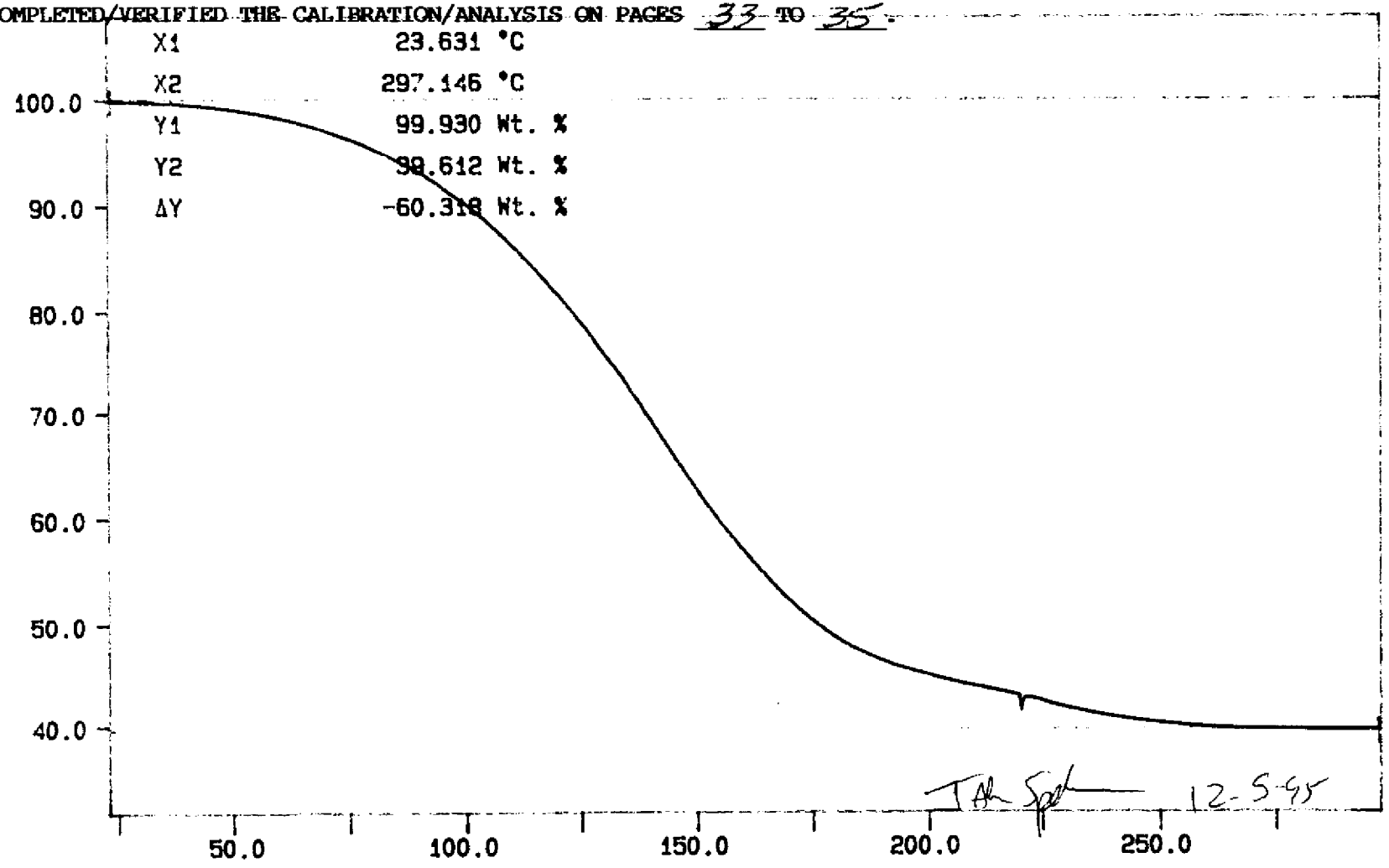
Other instrument was used.
12/5/95
BdV

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: TGA
File info: TER120401 Mon Dec 4 18:36:35 1995
Sample Weight: 24.774 mg
65N8-A Terliq

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 33 TO 35.

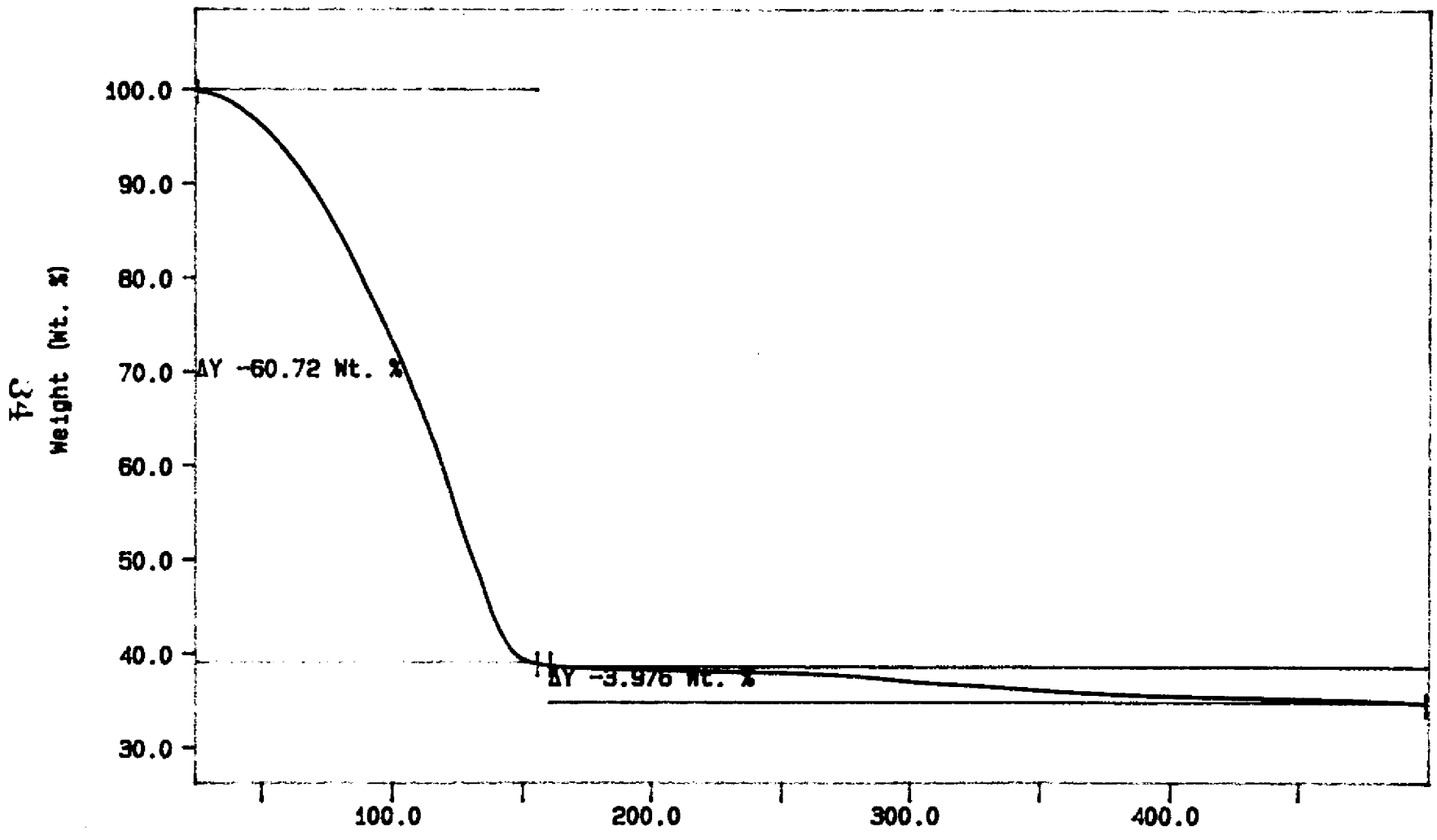


N2 10C/MIN
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 300.0 C

JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Dec 5 04:36:24 1995

33

Curve 1: TGA
File info: SAM120401 Mon Dec 4 20:32:45 1995
Sample Weight: 17.990 mg
S95T003746



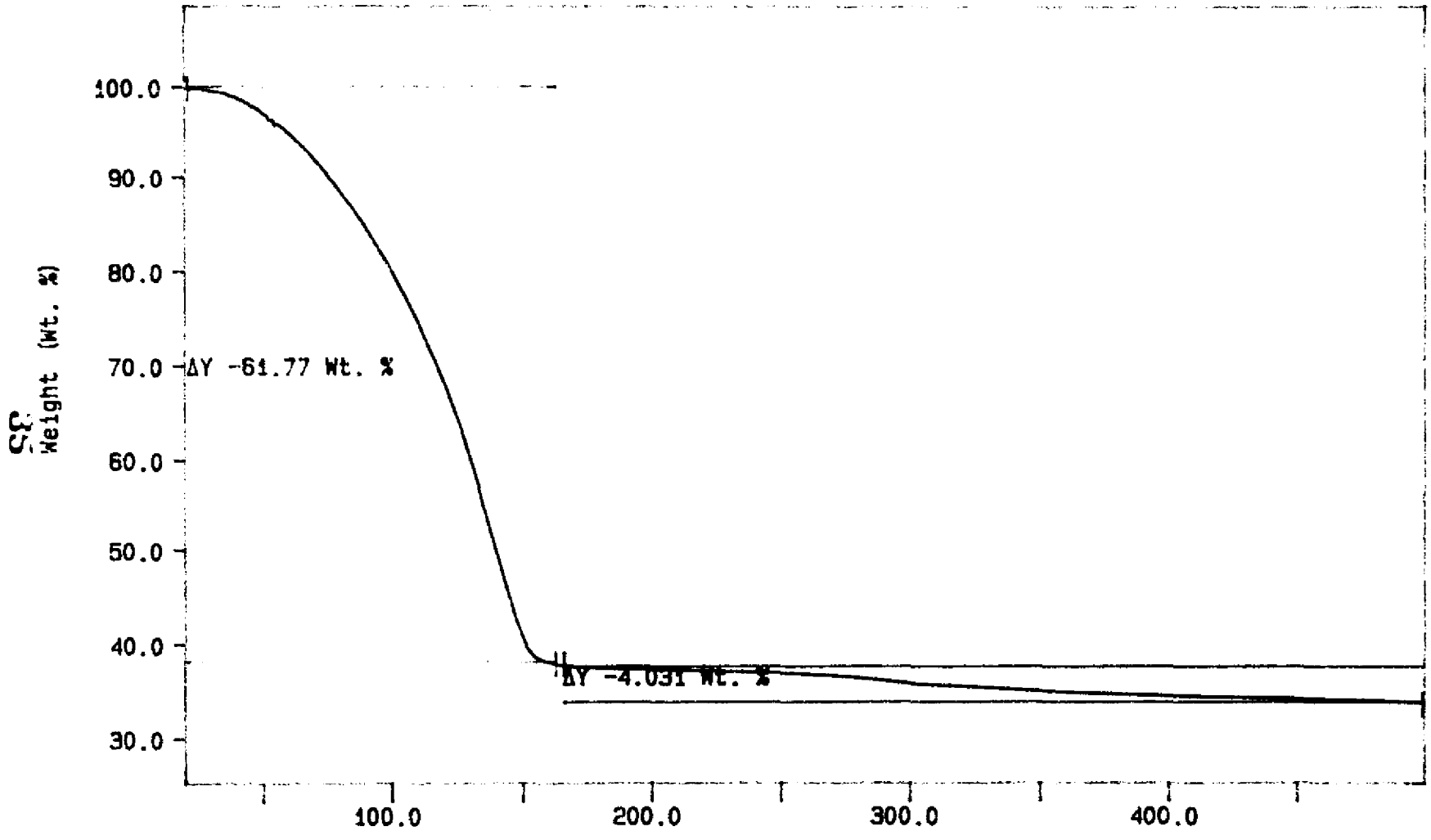
10C/MIN N2
TEMP1: 25.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Dec 4 20:36:09 1995

WHC-SD-WM-DP-157, REV. 0

34

Curve 1: TGA
File info: SAM120502 Tue Dec 5 03:42:41 1995
Sample Weight: 21.542 mg
S95T003746 DUP



10C/MIN N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 600.0 C

JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Dec 5 04:19:48 1995

WHC-SD-WM-DP-157, REV. 0

DISTRIBUTION SHEET

To Distribution	From Characterization Plans, Coordination and Reports	Page 1 of 1 Date: 12/01/95
Project Title/Work Order WHC-SD-WM-DP-157, Rev. 0, "45-Day Safety Screening Results for Tank 241-BX-112, Auger Samples 95-AUG-047 and 95-AUG-048"		EDT NO.: EDT-613475 ECN NO.: N/A

Name	MSIN	Text With all Attach	EDT/ECN ONLY
Pacific Northwest Laboratory			
J. R. Gormsen	K7-28		X
S. J. Harris	K7-22	X	
K. L. Silvers	P7-27		X
U.S. Department of Energy, RL			
C. A. Babel	S7-54	X	
Westinghouse Hanford Company			
J. N. Appel	G3-21		X
H. Babad	S7-30	X	
J. M. Conner	R2-12	X	
G. D. Forehand	S7-31		X
V. W. Hall	T6-03	X	
D. C. Hetzer	S6-31		X
L. Jensen	R2-12	X	
N. W. Kirch	R2-11	X	
M. J. Kupfer	H5-49	X	
J. E. Meacham	S7-15	X	
P. M. Morant	H4-25	X	
K. L. Powell	T6-04		X
L. W. Shelton	H5-49	X	
B. C. Simpson	R2-12		X
J. A. Voogd	H5-03		X
Central Files	A3-88	2	
EDMC	H6-08	X	
LTIC	T6-03		X
TCRC	R2-12	X	
TFIC (Tank Farm Information Center)	R1-20		X
Washington State Department of Ecology Single-Shell Tank Unit Manager			
A. B. Stone	B5-18	X	
U. S. Department of Energy			
Jim Poppiti 12800 Middlebrook Rd. Trevion II, EM-36 Germantown, MD 20874			X
Los Alamos Technical Associates			
~~A. T. DiCenso~~ T TTRA/1 309 Bradley Blvd. Richland, WA 99352		X	